CLAIMS:

1.   An integrated circuit (IC) chip, comprising:

a plurality of chip areas;

a plurality of temperature sensors, at least one temperature sensor per chip area; and

a comparator for comparing the output of the plurality of temperature sensors, the comparator further employable to generate a signal if the difference between the outputs of the plurality of temperature sensors exceeds a threshold.

2.   The integrated circuit of Claim 1, wherein the temperature sensor measures a temperature to generate a voltage.

3.   The integrated circuit of Claim 1, wherein the temperature sensor measures a temperature to generate a current.

4.   The integrated circuit of Claim 1, wherein the temperature sensor comprises a pn junction.

5.   The integrated circuit of Claim 1, wherein the temperature sensor comprises a thermal resistor.

6.   The integrated circuit of Claim 1, wherein the comparator is coupled to the chip.

7.   The integrated circuit of Claim 1, wherein the comparator compares voltages generated from the plurality of temperature sensors.

8. The integrated circuit of Claim 1, further comprising a layer of silicon dioxide interposed between the substrate of the integrated circuit and a computational element of the integrated circuit.

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9. An integrated circuit, comprising:

at least two chip areas, at least one chip area employed as a simulation area;

at least two temperature sensors, at least one

10 temperature sensor per chip area; and

a comparator for comparing the output of the plurality of temperature sensors.

10. The integrated circuit of Claim 9, further

15 comprising a layer of silicon dioxide interposed between the substrate of the integrated circuit and a computational element of the integrated circuit.

11. The integrated circuit of Claim 9, further

20 comprising a third chip area and a third associated temperature sensor, wherein the output of the third associated temperature sensor is employed by the comparator.

12. The integrated circuit of Claim 9, wherein the

25 temperature sensor measures a temperature to generate a voltage.

13. The integrated circuit of Claim 9, wherein the temperature sensor comprises a pn junction.

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14. The integrated circuit of Claim 9, wherein the temperature sensor comprises a thermal resistor.

15.   The integrated circuit of Claim 9, wherein the comparator is coupled to the chip.

16.   A method for determining a hot area of an integrated circuit, comprising:

reading a first temperature sensor in a first area of a chip;

reading a second temperature sensor in a second area of a chip;

comparing the readings of the first temperature sensor and the second temperature sensor; and

if the difference between the first temperature reading and the second temperature reading exceeds a threshold, indicating an error condition.

17.   The method of Claim 16, further comprising:

reading a third temperature sensor in a third area of the chip, and generating a first comparison value from the difference between the reading of the first temperature sensor and the second temperature sensor;

comparing the readings of the first temperature sensor and the third temperature sensor;

generating a second comparison value from the difference between the reading of the first temperature sensor and the third temperature sensor; and

if the difference between the first comparison value and the second comparison value exceeds a threshold, indicating an error condition.

18.   The method of Claim 16, further comprising:

distributing the first temperature sensor to a relative cold part of the chip, and the second temperature sensor to a relative hot part of the chip.

19. The method of Claim 15, further comprising:

distributing the first temperature sensor to a relative cold part of the chip, and the second and third temperature sensors to relative hot parts of the chip.

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20. A computer program product for determining a hot area of an integrated circuit, the computer program product having a medium with a computer program embodied thereon, the computer program comprising:

10   computer code for reading a first temperature sensor in a first area of a chip;

computer code for reading a second temperature sensor in a second area of a chip;

computer code for comparing the readings of the first

15 temperature sensor and the second temperature sensor; and

if the difference between the first temperature reading and the second temperature reading exceeds a threshold, computer code for indicating an error condition.

20   21. A processor for determining a hot area of an integrated circuit, the processor including a computer program comprising:

computer code for reading a first temperature sensor in a first area of a chip;

25   computer code for reading a second temperature sensor in a second area of a chip;

computer code for comparing the readings of the first temperature sensor and the second temperature sensor; and

if the difference between the first temperature reading

30 and the second temperature reading exceeds a threshold, computer code for indicating an error condition.